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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/823,441	03/30/2001	Jean-Luc Nougaret	444.26.01	5697

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EXAMINER

MCCARTNEY, LINZY T

ART UNIT PAPER NUMBER

2671

DATE MAILED: 02/02/2004

25

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/823,441

Applicant(s)

NOUGARET ET AL.

Examiner

Linzy McCartney

Art Unit

2671

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 10 December 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 10 and 12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 10 and 12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Information Disclosure Statement*

1. Information disclosure statements (IDS) were submitted on 6/10/2003 and 8/28/2003. The submissions are in compliance with the provisions of 37 CFR 1.97. Accordingly, the examiner has considered the information disclosure statements.

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
2. Claims 10 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brogan et al., "Group Behaviors for Systems with Significant Dynamics" (Brogan).
  - a. Referring to claim 10, Brogan discloses a) assigning locations in said target layout to the respective members lying at locations in said initial layout so that the members are moved along the shortest distances to the locations in the target layout (page 140, column 2, paragraph 3); b) moving the members at the locations in said initial layout in accordance with the assignments made in step a) (Fig. 8); calculating the value of a predetermined evaluation function associated with the movements, accomplished in said step b), of the respective members to the assigned locations in the target layout (page 143, column 2, paragraph 1); d) selecting K members where K is an integer smaller than N, having the greatest values of the evaluation function; and e) replacing the assignments of the locations in the target layout within K! combinations of only the selected K

members (page 143, column 1, paragraph 1 – column 2, paragraph 2; Fig. 8. Those members with non-zero predicted error are considered selected; note that only the members with non-zero predicted error have their locations in the target layout replaced. See Fig. 8.) Brogan does not explicitly disclose wherein after completion of step e), the method returns to step b) so as to perform steps b) to e) repeatedly. At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to repeat steps b) to e) repeatedly. The suggestion/motivation for doing so would have been because repeatedly perform the aforementioned calculations would have been necessary to compute the positions and velocities of each member of the group at each iteration.

b. Program of claim 12 performs the steps recited in method claim 10 therefore they are similar in scope and are rejected under the same rationale.

### ***Response to Arguments***

3. Applicant's arguments filed 12/10/03 have been fully considered but they are not persuasive. Applicant argues that Brogan fails to disclose replacing the assignments of the locations in the target layout. Applicant contends that Brogan teaches adjusting the velocities, not the positions of robots in the simulation. While the Examiner agrees that Brogan adjusts the velocity of the robots, the Examiner believes that the said adjustment leads to the replacement of the assignments in the target layout. Note that Brogan teaches continually determining the desired position in the group (i.e., target layout) by computing a desired distance to each of the neighboring robots and weighting this desired position by the actual distance between each pair of robots to determine a global desired position (page 137, column 1, paragraph 2; page 140, column 2, paragraph 2 – page 141, column 1, paragraph 1). The aforementioned position is

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reached in the robot simulation by adjusting the velocity of the robots (page 142, column 2, paragraph 1). As can be seen in Figure 8, the positions of the robots that have not reached steady state are replaced. It appears to the Examiner that the Applicant is interpreting the layout of the robots at steady state to be the target layout while the Examiner is interpreting the recalculated layout of each iteration of the simulation to be a target layout.

***Conclusion***

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Linzy McCartney** whose telephone number is **(703) 605-0745**. The examiner can normally be reached on Mon-Friday (8:00AM-5: 30PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Mark Zimmerman**, can be reached at **(703) 305-9798**.

**Any response to this action should be mailed to:**

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Commissioner of Patents and Trademarks

Washington, D.C. 20231

**or faxed to:**

**(703) 872-9314 (for Technology Center 2600 only)**

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive,  
Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding  
should be directed to the Technology Center 2600 Customer Service Office whose  
telephone number is (703) 306-0377.

ltm  
1/28/2004

  
MARK ZIMMERMAN  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600